Nov. 2, 1954 J. S. FAGAN 2,693,229

GASEOUS HEATER

Filed Jan. 22, 1952

Fig. 1.

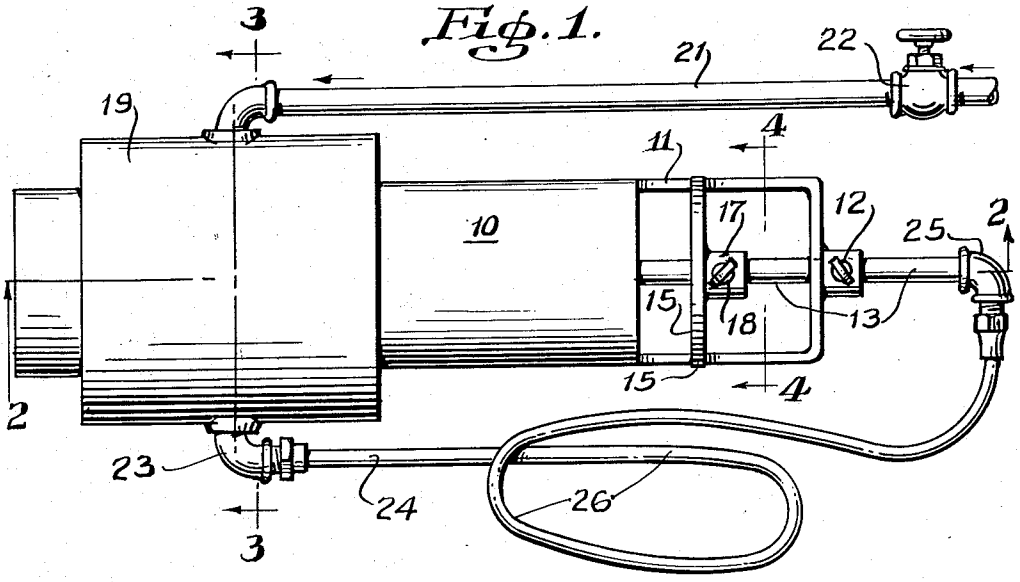


Fig. 2.

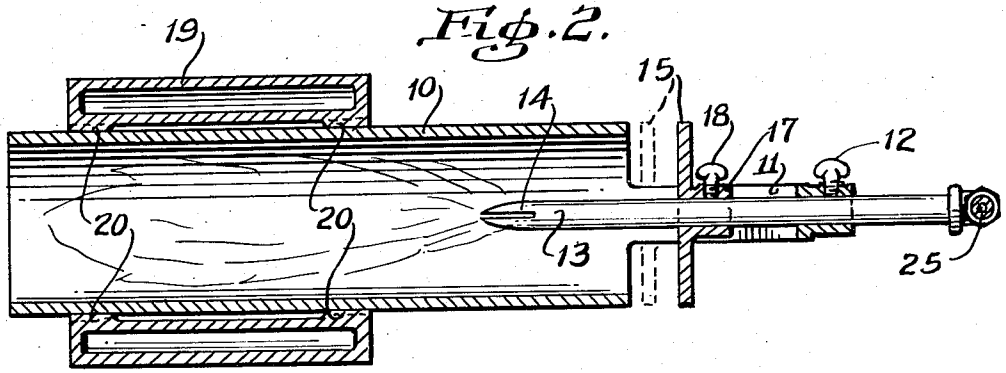


Fig. 3.

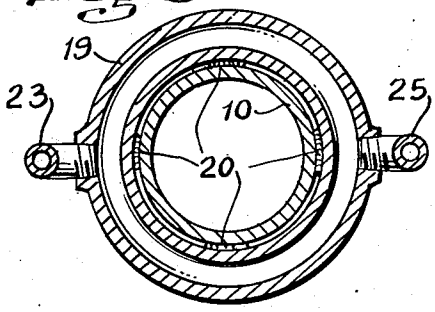
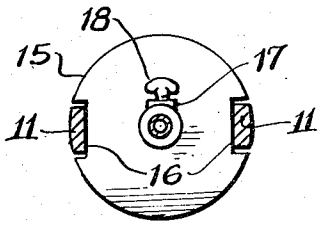


Fig. 4.



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GASEOUS HEATER

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Application January 22, 1952, Serial No. 267,657

1 Claim. (Cl. 158—53)

My invention relates to a gaseous heater of simple inexpensive construction, and adaptable for use in converting liquid fuel into gas and utilizing same as fuel in the development of heat, to be used for various purposes.

My invention consists in a stationary chambered member which receives the liquid fuel which is converted into gas within a heating tube, said chambered member being adjustably mounted on said heating tube, with means for controlling the admission of air into said tube and said burner being adjustable within said tube so as to vary the degree of generated heat.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangement of parts hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which:

Fig. 1 is a plan view of a gaseous heater constructed in accordance with my invention,

Fig. 2 is a longitudinal section taken on the line 2—2 of Fig. 1,

Fig. 3 is a cross section taken on the line 3—3 of Fig. 1,

Fig. 4 is a cross section taken on the line 4—4 of Fig. 1.

Referring by numerals to the accompanying drawing, **10** designates a heating tube, open at both ends, and provided at its rear end with a horizontally disposed U-shaped frame or support **11**. Adjustably mounted at the center of said frame, and adapted to be secured thereto by a set screw **12**, is a burner tube **13** which extends axially into the heating tube **10**, and its forward end being provided with slots or apertures **14** which serve as jet apertures for the gas as it discharges from said tube.

Adjustably mounted on the side members of frame **11**, adjacent the rear open end of the heating tube **10**, is a plate **15** which serves as a damper for the air entering said tube, and the edges of said plate are notched as designated by **16** at diametrically opposite points, for reception of the arms of the frame **11**.

Formed on plate **15** is a collar **17** carrying a set screw **18**, used for locking the damper to burner tube after adjustment. Arranged for longitudinal adjustment on tube **10** is a chambered tubular member **19**, considerably shorter than said tube and said member **19** is slightly spaced apart from said tube **10** by means of thin narrow lugs **20** formed on the inner face of said member adjacent its ends.

A liquid fuel supply pipe **21** provided with a valve **22** is connected to one side of chambered tubular member

19 and connected to the opposite side thereof by a fitting **23**, is a gas conducting pipe **24**, which is connected by a fitting **25**, to the outer end of the burner tube.

Pipe **24** is provided with an intermediate loop **26** which gives sufficient flexibility to enable burner pipe **13** to be adjusted lengthwise in the heating tube **10**.

In service, valve **22** is opened to permit liquid fuel to flow through pipe into the chambered member **19**, which, when heated, gasifies said liquid fuel and a portion of the gas passes through flexible tube **26**, to burner tube **13** and upon being ignited, the burning gas heats tube **10** and whatever work is placed immediately adjacent thereto. Damper **15** may be adjusted toward or away from the end of heating tube **10** to control the admission of air thereto and burner tube **13** may be moved into or from said heating tube so as to regulate the degree of heat imparted thereto, and to the chambered tubular member **19** in which the gas is generated.

Thus, it will be seen that I have provided a gaseous heater that is simple, strong, durable, of inexpensive structure and which is very effective in performing the functions for which it is intended.

Minor changes in the size, form and construction of the various parts of my improved gaseous heater may be made and substituted for those herein shown and described, without departing from the spirit of my invention, the scope of which is set forth in the appended claim.

I claim as my invention:

In a gaseous heater, a heating tube open at both ends, a chambered member arranged for sliding movement the entire length of said heating tube, lugs projecting inwardly from the end portions of said chambered member and bearing upon the heating tube, so as to maintain said chambered member in spaced relation upon said tube, a liquid supply tube leading to said chambered member, an integral U-shaped frame projecting from one end of said heating tube, a burner tube adjustably mounted in said U-shaped frame and extending axially into said heating tube, means for securing the heating tube to said frame, a damper slidable upon said burner tube and said frame, means for securing said damper to the burner tube after adjustment, and a tube connecting the chambered member to the outer end of said burner tube and which last mentioned tube is provided intermediate its ends with an extended loop.

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